

Improving the Methodology for Forming Computational Skills in Primary School Students

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Abstract: Relevance. The formation of mental counting skills occupies a special place in elementary school and is one of the main tasks of teaching mathematics at this stage. It is in the first years of training that the basic methods of oral calculations are laid, which activate the mental activity of students, develop memory, speech, and the ability to perceive what is said by ear in children, increase attention and speed of reaction.

Keywords: School, Students, Skills.

Mental counting is the oldest and simplest way of calculating. Knowledge of simplified methods of oral calculations remains necessary even with the complete mechanization of all the most labor-intensive computational processes.

Therefore, the primary school teacher should pay attention to mental counting from the moment when students come to the first grade. Skillfully delivered and systematically conducted mental counting develops students' ability to quickly and accurately perform a variety of oral calculations. To achieve the correctness and fluency of oral calculations during all four years of study in each mathematics lesson, it is necessary to allocate 5-10 minutes for exercises in oral calculations provided for by the program of each class.

Oral exercises are conducted in a question-answer form, all students in the class perform the same exercises at the same time. Oral exercises are also important because they activate the mental activity of students; when they are performed, memory, speech, attention, the ability to perceive what is said by ear, speed of reaction are activated, develop. It is also impossible to discount the important educational role of oral exercises - they discipline, teach children patience and the ability to wait for lagging behind comrades, to help them.

Since oral exercises or mental counting is a stage of the lesson, it has its own tasks:

1. Reproduction and correction of certain knowledge, skills and abilities of students necessary for their independent activity in the lesson or conscious perception of the teacher's explanation.
2. The teacher's control over the state of knowledge of students.
3. Psychological preparation of students for the perception of new material.
4. Increasing the cognitive interest of students in mathematics.

When conducting oral counting, the teacher must adhere to the following requirements:

- Exercises for mental counting are not chosen randomly, but purposefully.
- The tasks should be varied, the proposed tasks should not be easy, but they should not be "cumbersome".
- Texts of exercises, drawings and notes, if required, should be prepared in advance.
- All students must be involved in oral counting.

➤ When conducting oral counting, evaluation criteria (encouragement) should be thought out.

To test the calculation skills, I offer oral work (arithmetic dictations) aimed at clarifying the knowledge of tables.

In my lessons, I use the following types of exercises for mental calculations:

1. Finding the values of mathematical expressions. There are many variations of these exercises. The purpose of these exercises is to develop students' solid computational skills.
2. Comparison of mathematical expressions. Two expressions can be given and it is necessary to establish whether their values are equal, and if they are not equal, then which of them is greater or less. (encouragement) should be thought out.

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The purpose of such exercises is to promote the assimilation of theoretical knowledge about arithmetic operations, their properties, about equalities, inequalities; developing computing skills.

Think of a number from 1 to 10, add 1 to it, 1 more, subtract 1, 1 more, add 1. Now tell me the result, and I will tell you how much you have in mind. (To guess, you need to subtract 2 from the result. If there is time left, then you can invite students to solve the trick).

The purpose of such exercises is to develop the ability to solve an equation, to help students learn the connections between the components and the results of arithmetic operations.

This game clearly shows that each next number is formed by adding one to the previous number, and each previous one is obtained by subtracting one from the next. Based on the use of this game, it is supposed to count the number of cars from left to right and from right to left, and students conclude that it is possible to count in any direction, but it is important not to miss a single car and not to count it twice.

For each circulation, new tasks are compiled, and a corresponding ticket for them. In my opinion, by arousing interest and instilling love for mathematics through various types of oral exercises, the teacher will help students to actively work with educational material, awaken in them the desire to improve methods of computing and solving problems, replacing less rational ones with more perfect ones. And this is the most important condition for the conscious assimilation of the material.

Properly selected tasks and exercises make it possible to detect the level of formation of students' computational skills, to reveal how conscious their ability to solve text problems is, how mathematical terminology and other concepts are mastered. The rapid development of new information technologies and their introduction in Russia in recent years have left a certain imprint on the development of the personality of a modern child. A powerful flow of new information, advertising, the use of computer technology in television, game consoles, technology with built-in computers and computers have a great impact on the upbringing of the child and his perception of the world around him. Combining the capabilities of a book, calculator, TV, VCR, being a unique toy that can imitate other toys and a wide variety of games, a modern computer is at the same time an equal partner for a child, capable of very subtly responding to his actions and requests, which he sometimes lacks. The use of computers in the

educational and extracurricular activities of the school looks very natural from the point of view of the child and is one of the effective ways to increase motivation and individualize his learning, develop creative abilities and create a favorable emotional background. In this regard, I set the following goals and objectives for using a computer in the formation of computational skills:

1. Implementation of an individual-personal approach in teaching schoolchildren.
2. Expanding horizons, developing memory, attention, creative imagination, mathematical and figurative thinking.
3. Propaedeutics of the use of a personal computer as a tool for practical activities.

Younger schoolchildren are distinguished by sharpness and freshness of perception, a kind of "contemplative curiosity", which is explained by the age-related characteristics of higher nervous activity. With lively curiosity, children perceive the environment and everything new. The perception of primary school students is characterized by pronounced emotionality.

At primary school age, involuntary attention is developed, which becomes especially concentrated and stable if the educational material is clear, bright, and evokes an emotional attitude in schoolchildren. In the role of such visibility, you can use a computer. In connection with the age-related relative predominance of the activity of the first signal system, younger schoolchildren have a more developed visual-figurative memory than verbal-logical memory.

True assimilation of any educational material is impossible without the active activity of the imagination. In the primary grades, children improve their recreative imagination associated with the presentation of previously perceived, and also develop creative imagination.

All this determines the need to develop new systems of teaching methods. At the present stage of development, the use of a computer in the classroom in elementary school should become an organic basis.

The introduction of computers in the formation of computational skills, in my opinion, is promising, because:

- increases the effectiveness of the lesson;
- organizes the mode of individual survey;
- enhances students' interest in the lesson.

The most common choice-of-answer test in testing practice. In elementary school, you can limit yourself to three answers to choose the correct one from them. Moreover, when compiling tests, I take into account the typical mistakes of students. Basically, with the help of tests of this type, I check the formation of certain methods of action.

I believe that tests perform an important function, accustoming students to self-control.

The next type of test is a test to establish the truth (falsity) of a statement. It offers only two answers to choose from - "yes" and "no". This type of test contains a high probability of random selection of the answer. In order to avoid this shortcoming, it is recommended to duplicate the test questions in content, changing only their design. Such tests test the ability of students to reason, draw conclusions, distinguish a true statement from an incorrect one.

And the third kind of tests for filling in the gaps in the true statement.

Tests of this type help the teacher to obtain information about the quality of the formation of the speech mathematical culture of students and the level of mastery of the mathematical apparatus, i.e., the goals of the test can be complex.

I use different types of tests in my work on the formation of computational skills.**3. Intersubject communications.**

Children really like to complete tasks aimed at developing computational skills with non-mathematical information. This is one of the methods of a variety of activities in the work to improve computing skills.

Mathematical tasks are arranged in order of increasing complexity, the form from the record is the most diverse:

- chains of examples,
- simple and branched tables,
- magic squares,
- amazing squares for addition and multiplication.

At the lesson, students perform a variety of mathematical tasks, alternating them with some information about animals and events in the form of testing, which occurs with the help of a computer, which makes it possible to enhance the educational effect, to implement, to implement interdisciplinary connections, to increase the cognitive activity of children. With appropriate preparation, additional information in the lesson does not load children, but only contributes to the assimilation of program material by creating interest in learning and increasing cognitive activity.

- With a varied presentation of mathematical tasks and information, as well as an emotional impact on children, additional information contributes to an increase in cognitive activity, since in the proposed tasks:
- firstly, there is a change in the activities of children (they listen, read, speak, make up examples, solve them and write down the results),
- Secondly, children learn interesting facts, which not only expands their horizons, but also contributes to the overall development and encourages independent learning of new things. The development of the desire to learn new things is one of the educational goals of these tasks. And the computer is able to play the role of a unique visualization, capable of forming a desire to learn new things at a high emotional upsurge.

CONCLUSION. Past experience shows that the computer naturally fits into the life of the student and teacher of elementary school and is an effective technical tool with which you can significantly diversify the learning process. Combining a variety of advantages, it is a very important tool for teaching modern children, each lesson causes an emotional upsurge in children, even lagging students are willing to work with a computer. On the other hand, this teaching method is also very attractive for teachers: it helps them to better assess the child's abilities and knowledge, understand him, and encourages them to look for new, non-traditional forms and methods of teaching.

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